8. (Amended) A Laser means as in claim 1 wherein said diode pumping array (1) is held by a diode array mount (3) and wherein said optical means comprises adjusting means (110) for adjusting the axis of the pump light beam (7) to a defined plane relative to the diode array mount (3), which adjusting means includes at least one wedged window (27, 127).

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13. (Amended) A Laser means as in claim 11 wherein the pumping device mounting frame (111) comprises three horizontal positioning areas (115) and preferably three vertical positioning areas (116) for mounting diode array pumping device (103) at the laser system base (28) in a defined position.

14. (Amended) A Laser means as claim 1 wherein said optical means comprises

– a second lens (16a) for collimating said partial beam in the vertical and in the horizontal plane and directing it to said spot, which second lens is positioned at a distance away from the diode pumping array corresponding to the focal length of the second lens;

- a second cylindrical lens (17) positioned at a distance away from the diode pumping array corresponding to the sum of the focal length of the second cylindrical lens and of twice the focal length of the second lens; and

– a focusing lens (18) for collimating said partial beam in a first plane and for focusing the pump light beam in a second plane perpendicular to the first plane.

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15. (Amended) A Laser means as in claim 1 wherein said diode pumping array (1) comprises a laser diode bar (1c) generating said partial beams which are combined to a pump light beam (7).

16. (Amended) A Laser means as in claim 1 with an aspect ratio for the pump beam (7) of >15:1.

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17. (Amended) A diode-pumped Laser operating in the fundamental mode comprising

- a laser means according to claim 1 and
- a solid state laser medium (4) which is excited by said laser means.

19. (Amended) A diode-pumped Laser as in claim 17, characterized in that the thermal profile of the laser medium is smooth and enables fundamental mode laser operation.

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20. (Amended) A diode-pumped Laser as in claim 17, wherein the laser mode is strongly elliptical within said laser medium (4).

22. (Amended) A diode-pumped Laser as in claim 17 comprising cavity-forming means, whereby a reflective cavity element closest to an entrance face of said laser medium is not in direct contact with said entrance face.

23. (Amended) A diode-pumped Laser as in claim 17, wherein the axis of said pump beam is positioned obliquely or even vertically to the axis of the laser mode.

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24. (Amended) A diode-pumped Laser as in claim 17, wherein said laser medium (4) comprises Nd:Vanadate.

25. (Amended) A diode-pumped Laser as in claim 17 with a semiconductor saturable absorber (22) for obtaining a stable modelocked average output power of several Watts.

27. (Amended) A diode-pumped Laser as in claim 25, where stable modelocked operation is obtained at a pulse energy density on the semiconductor saturable absorber (22) which is lower than 0.5 mJ/cm^2.

28. (Amended) A diode-pumped Laser with a laser means as in claim 4, comprising a single-pass or multi-pass amplifier or regenerative amplifier setup for generating micro-Joule- or milli-Joule-level laser pulse energies.

29. (Amended) A solid state laser medium (4) excited by a laser means according to claim 1 which is partly supported in at least two first regions (11a, 11b) contacting thermally conducting material (12), and with at least two second regions adjacent to said first regions (11a, 11b), the surface of said second regions contacting material (13) with low thermally conductivity.

32. (Amended) A solid state laser medium (4) according to claim 29, wherein the heat flow from the laser medium (4) substantially has an one-dimensionality.

35. (Amended) A diode array pumping device (103) as in claim 33 further comprising a pumping device mounting frame (111) for holding said diode array mount (3) and said at least one window wherein said mounting frame (111) has a contact plane for fixing the diode array pumping device (103) to said laser system base (28).

37. (Amended) A diode array pumping device (103) as in claim 35 wherein the pumping device mounting frame (111) comprises three horizontal positioning areas (115) and

a 10 preferably three vertical positioning areas (116) for mounting diode array pumping device (103) at the laser system base (28) in a defined position.

REMARKS

Claims 1-39 are pending. By this Preliminary Amendment, claims 3, 8, 13-17, 19-20, 22-25, 27-29, 32, 35 and 37 are amended to eliminate multiple dependencies. Prompt and favorable examination on the merits is respectfully requested.

The attached Appendix includes marked-up copies of each rewritten claim (37 C.F.R. §1.121(c)(1)(ii)).

Respectfully submitted,

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Attachment: Appendix

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